

REMARKS

The Official Action mailed June 15, 2007, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on December 27, 2004; July 15, 2005; August 26, 2005; November 22, 2005; and April 9, 2007.

Claims 1-67 were pending in the present application prior to the above amendment. Independent claims 1-4, 21, 22, 38 and 51 have been amended to better recite the features of the present invention. Dependent claims 31-33, 41 and 56-59 have been amended to conform with amended independent claims 1-4, 21, 22, 38 and 51. The features of dependent claims 60-67 have been incorporated into independent claims 1-4, 21, 22, 38 and 51. Accordingly, claims 1-59 are now pending in the present application, of which claims 1-4, 21, 22, 38 and 51 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraphs 5-21 of the Official Action reject claims 1-67 as obvious based on the combination of U.S. Patent No. 5,902,688 to Antoniadis, U.S. Patent No. 6,049,167 to Onitsuka, Burrows ("Organic vapor phase deposition: a new method for the growth of organic thin films with large optical non-linearities," Journal of Crystal Growth 156 (1995) 91-98), U.S. Patent No. 5,225,238 to Ardaillon and U.S. Patent No. 5,534,314 to Wadley, either alone or in combination with one or more of the following: U.S. Patent No. 5,945,967 to Rallison, U.S. Patent No. 6,495,198 to Peng, U.S. Patent No. 6,537,607 to Swanson, U.S. Patent No. 5,921,836 to Nanto, U.S. Patent No. 4,672,265 to Eguchi, and U.S. Patent No. 6,294,892 to Utsugi. The Applicant respectfully submits that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended. Independent claims 1-4, 21, 22, 38 and 51 have been amended to recite that an evaporation cell comprises a first portion and a second portion having a diameter smaller than that of the first portion, and that the organic electroluminescence material is ejected from an end portion of the second portion, which are supported in the present specification, for example, by Figures 1 and 2. With this structure, the claimed invention has advantages (i) that a flux distribution of an organic electroluminescence material ejected from an evaporation cell gains directivity (page 6, line 23, to page 7, line 6), (ii) that a given pattern of evaporation films can be formed over a substrate without using a shadow mask (page 7, lines 16-17), and (iii) that minute patterns can be drawn over a large-area substrate (page 7, lines 21-22). The Applicant respectfully submits that Antoniadis, Onitsuka, Burrows, Ardaillon and Wadley, either alone or in combination with one or more of Rallison, Peng, Swanson,

Nanto, Eguchi and Utsugi, do not teach or suggest the above-referenced features of the present invention.

Since Antoniadis, Onitsuka, Burrows, Ardaillon and Wadley, either alone or in combination with one or more of Rallison, Peng, Swanson, Nanto, Eguchi and Utsugi do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained.

Furthermore, in the wake of the recent Supreme Court decision of KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727 (2007), the PTO's Deputy Commissioner for Patent Operations issued on May 3, 2007, a memorandum to all Technology Center Directors ("May 3, 2007 Memo") noting that "a showing of 'teaching, suggestion, or motivation' to combine the prior art to meet the claimed invention could provide a helpful insight in determining whether claimed subject matter is obvious under 35 U.S.C. § 103(a)." However, whatever test for obviousness may be employed, "the analysis supporting a rejection under 35 U.S.C. § 103(a) should be made explicit, and it [is] 'important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements' in the manner claimed." (May 3, 2007 Memo; emphasis added). Thus, the law still requires a reason for combining references (e.g., a benefit), and that reason must have "rational underpinning to support the legal conclusion of obviousness." In re Kahn, 441 F.3d 977, 988 (Fed.Cir. 2006) (cited with approval in KSR, 127 S.Ct. 1727). Against this legal backdrop, the Applicant respectfully submits that the Examiner has fallen well short of his burden in making the pending obviousness rejections based on the combination of Antoniadis, Onitsuka, Burrows, Ardaillon and Wadley, either alone or in combination with one or more of Rallison, Peng, Swanson, Nanto, Eguchi and Utsugi.

There is no proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Antoniadis, Onitsuka, Burrows, Ardaillon and Wadley, either alone or in combination with one or more of Rallison, Peng, Swanson, Nanto, Eguchi and Utsugi or to combine

reference teachings to achieve the claimed invention. MPEP § 2142 states that the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is respectfully submitted that the Official Action has failed to carry this burden. While the Official Action relies on various teachings of the cited prior art to disclose aspects of the claimed invention and asserts that these aspects could be modified in the manner asserted in the Official Action, it is submitted that the Official Action does not adequately set forth why one of skill in the art would combine the references to achieve the features of the present invention.

The test for obviousness is not whether the references "could have been" combined or modified as asserted in the Official Action, but rather whether the references should have been. As noted in MPEP § 2143.01, "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (emphasis in original). Thus, it is respectfully submitted that the standard set forth in the Official Action is improper to support a finding of *prima facie* obviousness.

The Applicant respectfully submits that Ardaillon may not be relied upon as a basis for rejection and that the Official Action has not demonstrated *prima facie* evidence that one of ordinary skill in the art at the time of the present invention would have been motivated to improve the device of Antoniadis, Onitsuka, Burrows and Wadley based on Ardaillon. MPEP § 2141.01(a) states the following:

The examiner must determine what is "analogous prior art" for the purpose of analyzing the obviousness of the subject matter at issue. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also In re Deminski, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); In re Clay, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992).

The Official Action has not shown that Ardaillon is in the field of applicant's endeavor or that Ardaillon is reasonably pertinent to the particular problem with which the Applicant is concerned. Ardaillon is not related to film formation but appears to be directed to distillation. Specifically, Ardaillon appears to teach an evaporation of an organic solvent, and the evaporation is performed to obtain an emulsion containing less than about 0.5% organic solvent (column 3, lines 45-68). The Applicant respectfully submits that the distillation process of Ardaillon is not reasonably pertinent to Antoniadis, Onitsuka, Burrows and Wadley or the features of the present invention. Therefore, the Official Action may not rely on Ardaillon as a basis for rejection, and the Applicant respectfully submits that there is no reason to combine Ardaillon with the other cited references.

Further, regarding Wadley, please incorporate the arguments presented at pages 17-18 of the *Amendment* filed April 9, 2007, and at pages 17-19 of the *Amendment* filed October 23, 2006. In addition, the Applicant notes that Wadley may disclose that evaporation via resistive heating is operable for materials that have a low melting point at column 7, lines 24-35. However, regardless of this description, Wadley is related to an e-beam evaporation. For example, the Official Action asserts that Wadley teaches an evaporation method at atmospheric pressure, but the evaporation method is related to e-beam evaporation using a water-cooled crucible. The Official Action has not provided a reason why Wadley's evaporation using a water-cooled crucible could or should be applied to the process of the alleged combination of Antoniadis, Onitsuka, Burrows and Ardaillon. The Official Action appears to pick and choose in a piecemeal fashion isolated features from multiple disparate references to support the rejection without providing sufficient reason for the alleged combination.

Therefore, the Applicant respectfully submits that the Official Action has not provided a proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Antoniadis, Onitsuka, Burrows, Ardaillon and Wadley, either alone or in combination with one or

more of Rallison, Peng, Swanson, Nanto, Eguchi and Utsugi or to combine reference teachings to achieve the claimed invention.

In the present application, it is respectfully submitted that the prior art of record, either alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

  
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